A NEW SPECIES OF VIGUIERA (ASTERACEAE-HELIANTHEAE) FROM NAYARIT, MEXICO

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Viguiera is a notably complex genus with relationships extending to such well-known genera or generic segregates as *Helianthus, Tithonia,* and *Hymenostephium.*

Viguiera websteri, described below, belongs to a group of species that Blake (1918) recognized as a distinct genus, *Hymenostephium.* D'Arcy (1975) sunk the latter into synonymy with *Viguiera;* this was also accepted by H. Robinson (1977). Neither author went so far as to include *Hymenostephium* within sect. *Diplostichis* of *Viguiera,* but I believe that its relationship is in, or near, this group and consequently concur with their generic disposition.

Detection of the relationship of *Hymenostephium* to *Diplostichis* (and consequently *Viguiera*) by D'Arcy and H. Robinson is not surprising, for Blake, himself, (1918, p. 7) notes, "They [*Hymenostephium*] are distinguished from the section *Diplostichis* of *Viguiera,* which they closely resemble in all other features, solely by their pappus . . .". The same may be said for the genus *Haplocalymma* Blake, which H. Robinson (1977) reduced to synonymy under *Viguiera,* a submersion to which I also subscribe, but again, this is not unexpected since Blake (p. 8) went on to state that *Haplocalymma* ". . . is clearly a lateral offshoot of the *Diplostichis-Hymenostephium* line, . . .".

And that is one of the problems in dealing with Blake's otherwise very scholarly treatment of the Compositae: he tended to let the absence of one, or perhaps two, characters *make* a genus. As noted by Cronquist (1968, p. 10) ". . . the absence of a character is a less reliable guide to taxonomic affinities than its presence". In the case of the pappus, very simple but loose, genetic control of its absence has been amply demonstrated by Clausen (1951) and many others.

Viguiera websteri B. L. Turner, sp. nov. *V. hintonii* H. Robinson simulans sed capitulis pluribus majoribus, pedunculis longioribus, paleis receptaculi majoribus, plantis parvis erectis perennis caulibus comparata tenuibus, rhizomatibus ligeis cormoideis. (Fig. 1)

Perennial herb 30–65 cm tall, the stems slender, sparsely appressed pubescent to nearly glabrate, arising from woody, corm-like rootstocks, ca 20 mm long, 15–20 mm thick. Leaves opposite throughout, except for the several much-reduced leaves that subtend each of the flowering peduncles; petioles short, 3–8 mm long; blades ovate, 3–6 cm long, 1.5–2.5 cm wide, sparsely appressed-pubescent above and below, the margins crenate-serrate. Inflorescence loose, the heads remote, mostly (2)3–5 per

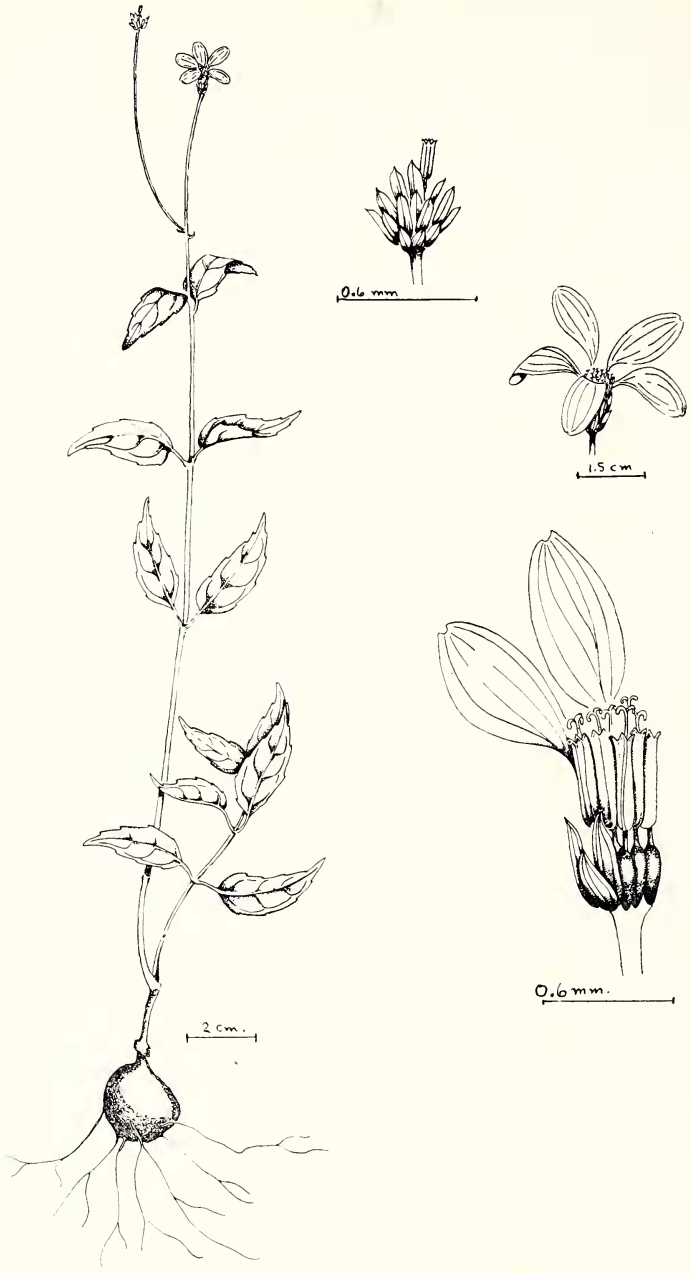

FIG. 1. Sketch of isotype (LL) of *Viguiera websteri* Turner: left, habit; upper right, involucre; middle right, individual head; lower right, partial head showing florets.

secondary branch, the ultimate peduncles (1)2–5 cm long. Involucre campanulate, 2-seriate; bracts, lanceolate-ovate, 2.0–3.5 mm long, ca 1 mm wide, moderately appressed-pubescent, 2–3 striate. Receptacle convex, knobby; bracts linear-ovate, acute or apiculate, ca twice as long as the involucre. Ray florets 8, yellow, neuter; ligule ca 5 mm long, 2–3 mm wide, the tube ca 0.8 mm long. Disk florets 20–30, yellow; corolla ca 4 mm long, the tube sparsely pubescent, ca 1 mm long; the lobes 5, ca 0.6 mm long; stylar appendages caudate, pubescent beneath, especially at the apex. Achenes black, sparsely appressed pubescent, somewhat tetragonally-flattened, ca 2 mm long, 1 mm wide; pappus absent.

Type: Mexico. Nayarit; "oak woods on volcanic rock 25 km by road S of Tepic" (between Tepic and Compestela), ca 1000 m, 18 Oct 1970, *G. L. Webster and G. J. Breckon 15744.* (Holotype DAV; isotype, LL).

The closest relationship of *Viguiera websteri* is probably with the recently described *V. hintonii* H. Robinson (1977) from Michoacan and Guerrero. It has the foliage and achene characters of this taxon but its habit is markedly different (low perennial from corm-like rootstocks vs. shrub 1–2 meters tall). Further, the heads of *V. websteri* are much larger (6–7 mm vs. 3–4 mm) with more numerous, larger florets.

The typification of *Viguiera hintonii* (*McVaugh 22637,* US) is unfortunate since H. Robinson has apparently described a plant whose inflorescence (to judge from the illustration accompanying his description) has been badly affected by insect egg deposition and larval development among heads, so that the peduncles of the capitula are described as 1–10 mm long. This range holds for isotypic material at TEX, but the heads are also badly infested by insects. Paratypic material (*Hinton et al. 14182,* LL), however, is relatively free of insects, possessing peduncles up to 30 mm long.

The section *Diplostichis* (including *Hymenostephium*) is in much need of detailed study. There is a perplexing array of variation in the group as noted by H. Robinson, especially along the Pacific Mountain slopes from Guatemala to Durango. Field work should do much to help unravel the complex and I suspect that several additional undescribed species will come to light in the process.

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